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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,684	08/21/2003	Michael L. Oliver	DP-310111	8289
22851	7590	07/05/2005	EXAMINER	
DELPHI TECHNOLOGIES, INC.			TO, TOAN C	
M/C 480-410-202			ART UNIT	
PO BOX 5052			PAPER NUMBER	
TROY, MI 48007			3616	

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/645,684

Applicant(s)

OLIVER ET AL.

Examiner

Toan C. To

Art Unit

3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/12/04; 6/17/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, and 9-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gross et al (U.S. 6,598,932) in view of Catanzarite et al (U.S. 6,070,681).

Gross et al discloses a controlled suspension system for use between a truck cab and an associated vehicle frame (5) comprising: a strut (3v, 3h) adapted to be attached at one end to a truck cab (1) and at an opposite end to an associated vehicle frame (5), the strut module including an air sleeve (21) capable of being selectively pressurized; whereby the distance between the cab (1) and the associated frame (5) is maintained within desired limits by selective pressurization of the air sleeve (21).

As to claims 2-7, Gross et al discloses a controlled suspension system wherein the strut module includes a strut having an inner tube (27), an outer tube (23) concentric with the inner tube (27) and a bearing sleeve (roller bearing 23a) positioned between the inner tube (27) and said outer tube (23), whereby the bearing sleeve (23a) distributes a bending moment applied to ends of said strut; wherein the air sleeve (21) is connected to the inner tube (27) and the outer tube (23); wherein the air sleeve (21) is concentric with the inner tube (27); wherein the air sleeve (21) includes a flexible portion connected to the outer tube; wherein the air sleeve includes a relatively rigid portion

Art Unit: 3616

(19) connection to the inner tube (27); wherein the relatively rigid portion is concentric with the inner tube (27).

As to claim 9, Gross et al discloses a controlled suspension system, wherein the strut module includes a three-point connection (the mounting flange of the combine air spring and shock absorber as shown in figure 4) adapted to interconnect the cab and the frame, whereby the two point/three-point connection resists relative lateral movement between the cab and the frame.

As to claims 10, 13-14, and 16-17, Gross et al discloses a controlled suspension system; wherein the frame includes a pair of longitudinal frame elements (best shown in figure 2) and the strut (3v, 3h) is adapted to be positioned adjacent to an outboard side of the frame elements, thereby providing clearance beneath said cab and between said frame elements; Gross et al further discloses a second strut being adapted to be positioned adjacent the other of the frame element, thereby providing clearance beneath the cab and between the frame element, and the second strut is positioned adjacent outboard side of the frame element (see figure 2); and the second strut includes an air sleeve capable of being selectively pressurized.

Gross et al fails to disclose the invention, wherein the strut module including a height sensor for measuring a distance between the truck cab and the associated frame and generating a signal indicating thereof; and a controller for receiving the signal from the height sensor and selectively pressurizing the air sleeve; and the controller is mounted on the strut.

Catanzarite et al teaches the invention wherein, the cab suspension including a height sensor (30, 30a, or 30a') for measuring a distance between the truck cab (22) and the associated frame (24) and generating a signal indicating thereof; and a controller (36) for receiving the signal from the height sensor (30, 30a, or 30a') and selectively pressurizing the air sleeve (26).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the cab suspension of Gross et al by attaching the height sensor and the controller as taught by Catanzarite et al on the mounting flange of the strut module in order to control dynamic vibration (ride comfort), or simply provide a controllable level of damping between the cab and frame.

With respect to claims 11-12 and 15, It would have been obvious to one having ordinary skill in the art at the time the invention was made to alternatively modify the cab suspension system of Gross to positioned the strut at an inboard end of the frame, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

3. Claims 18-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gross et al (U.S. 6,598,932) in view of Catanzarite et al.

Gross et al discloses a controlled suspension system for use between a truck cab and an associated vehicle frame (5) comprising: a strut (3v, 3h) adapted to be attached at one end to a truck cab (1) and at an opposite end to an associated vehicle frame (5); wherein the strut module includes a three-point connection (the mounting flange of the combine air spring and shock absorber as shown in figure 4) adapted to

Art Unit: 3616

interconnect the cab and the frame, whereby the two point/three-point connection resists relative lateral movement between the cab and the frame; whereby the distance between the cab (1) and the associated frame (5) is maintained within desired limits by selective pressurization of the strut (3v);.

As to claims 19, 21-23, and 25 Gross et al discloses a controlled suspension system; wherein the frame includes a pair of longitudinal frame elements (best shown in figure 2) and the strut (3v, 3h) is adapted to be positioned adjacent to an outboard side of the frame elements, thereby providing clearance beneath said cab and between said frame elements; Gross et al further discloses a second strut being adapted to be positioned adjacent the other of the frame element, thereby providing clearance beneath the cab and between the frame element, and the second strut is positioned adjacent outboard side of the frame element (see figure 2); and the second strut includes an air sleeve capable of being selectively pressurized.

Gross et al fails to disclose the invention, wherein the strut module including a height sensor for measuring a distance between the truck cab and the associated frame and generating a signal indicating thereof; and a controller for receiving the signal from the height sensor and selectively pressurizing the air sleeve; and the controller is mounted on the strut.

Catanzarite et al teaches the cab suspension including a height sensor (13) for measuring a distance between the truck cab (22) and the associated frame (24) and generating a signal indicating thereof; and a controller (36) for receiving the signal from the height sensor (30, 30a, 30a') and selectively pressurizing the air sleeve (26).

Art Unit: 3616

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the cab suspension of Gross et al by attaching the height sensor and the controller as taught by Catanzarite et al on the mounting flange of the strut module in order to control dynamic vibration (ride comfort), or simply provide a controllable level of damping between the cab and frame.

With respect to claims 20 and 24, It would have been obvious to one having ordinary skill in the art at the time the invention was made to alternatively modify the cab suspension system of Gross to positioned the strut at an inboard end of the frame, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

#### ***Allowable Subject Matter***

4. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan C. To whose telephone number is (571) 272-6677. The examiner can normally be reached on Mon-Fri (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTo  
June 22, 2005

  
PAUL N. DICKSON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600